

UGSS: Last mile connectivity, Tamil Nadu, India

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Summary

To keep up with the demands of rapid urbanisation, the Government of Tamil Nadu (GoTN) has accorded priority to implement Under Ground Sewerage Schemes (UGSS) in all the needy Urban Local Bodies (ULBs) through different financial schemes in a phased manner. The GoTN has made efforts to reach the 'last mile' with adequate and equitable sanitation and hygiene in ULBs of Tamil Nadu. This paper aims to draw insights into the underlying factors and initiatives taken by the GoTN for the UGSS last-mile connectivity in the state.

Introduction

Tamil Nadu (TN) is a rapidly urbanising state in India with an urban population of 35 million (Census, 2011), constituting 48.5% of the total population. The total area of the state is 130,058 km² of which the urban area accounts for 12,525 km². There are 21 Corporations, 138 Municipalities, 490 Town Panchayats functioning in the state of Tamil Nadu.

In a state like TN, sanitation is essential for enhancing the quality of life and health and improving productivity. In this regard, GoTN has taken initiatives in UGSS implementation and also in Fecal Sludge Management (FSM) in a phased manner to reach last mile.

GoTN initiatives in UGSS stage wise implementation

In order to reach the last mile with adequate sanitation in the ULBs of Tamil Nadu, GoTN has taken initiatives majorly as three stages. The following section describes the actions and follow ups taken in each stage of implementation to ensure UGSS last mile connectivity.

Stage 1: 2000 to 2008

The GoTN had initiated actions for to implement UGSS connectivity in seven ULBs: Madurai, Tirunelveli, Thanjavur, Mayiladuthurai, Trichy, Kumbakonam, Karur, and Inam Karur, at the cost of USD 44 million under the National River Conservation Plan (NRCP) programme from 2000 to 2008. The GoTN provided funds for constructing a sewer network and treatment facility without the provision of individual household service connections (HSC), expecting the households to take the initiative on their own, as was the case with the TN water supply scheme. The total proposed HSCs in this stage was 272,829. However, only about 20% of connections established by public on their own initiative and paid for the service.

Stage 2: 2008 to 2017

During the next course of UGSS implementation, from 2008 to 2017, 22 ULBs (district headquarters) were chosen based on population density. The project was supported by various financial funding sources at the total cost of USD 110.6 million. This scheme allowed for connection up to the compound wall of the household. If the household was interested, they could take advantage of the service connections without disrupting the mobility on the street/roads. Around 318,564 service connections were proposed in this stage and in that around 66.6% of the HSCs got effected. Approximately 50% of the total proposed HSCs were achieved by stage 2.

Stage 3: 2018 to present

As it was observed to be a part of the households are not ready to take UGSS connections because of their financial inability for the internal plumbing works, even though the connection was given up to

the compound wall. The layout of the internal plumbing works adopted for the UGSS house service connection by the state is given in the figure 3.

In this stage the state has taken initiatives for the public with financial support for internal plumbing works for the connections are described below.

1. *Issued Government order on water supply and UGSS*

To address the financial inability of the public for HSCs, the GoTN issued an order on water supply and UGSS connection for households in all municipal corporations and municipalities across the state. This order made it mandatory for all existing and newly constructed households to have a water supply and sewerage network connection. There exists a provision for the households to pay the one-time deposit and connection charges, linked with the property tax, as 10 equal instalments to increase the coverage among the urban poor. The deposit and connection cost for the service is received as part of the respective ULB's general fund, and the ULB will be solely responsible for the implementation, maintenance, and sustainability of the provided wastewater treatment facility. This initiative intends to increase the revenue for the municipal corporation/municipalities in the form of tax and initial deposit and as the UGSS tax to be linked with property tax, it helps to reduce the debt burden. The monthly service charge helps to cover the fixed operation and maintenance costs of the schemes.

2. *Non-guaranteed loans to ULBs*

TN was the first state in India to establish an institutional mechanism to provide non-guaranteed loans to ULBs, allowing them to access water supply and sewerage systems and improve sanitation by increasing the HSCs. GoTN provided interest-free loans to ULBs from the revolving fund maintained by organisations offering financial assistance for implementing various infrastructural projects, such as TUFIDCO. The ULB used the loan amount for internal plumbing works of UGSS connections for the households.

3. *AMRUT 2.0 fund*

The Atal Mission for Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0) scheme was launched on October 2021 for the period of 5 years, which is designed to provide universal coverage of water supply through functional taps to all households in all the statutory towns in the country and coverage of sewerage/septage management in 500 cities covered in the first phase of the AMRUT scheme.

In order to achieve the full utilisation of the UGSS assets created, for the selected towns having population less than 100 thousand in Tamil Nadu, AMRUT 2.0 is providing USD 37 per connection to the ULBs.

Figure 1: Stage 3 UGSS implementation with internal plumbing



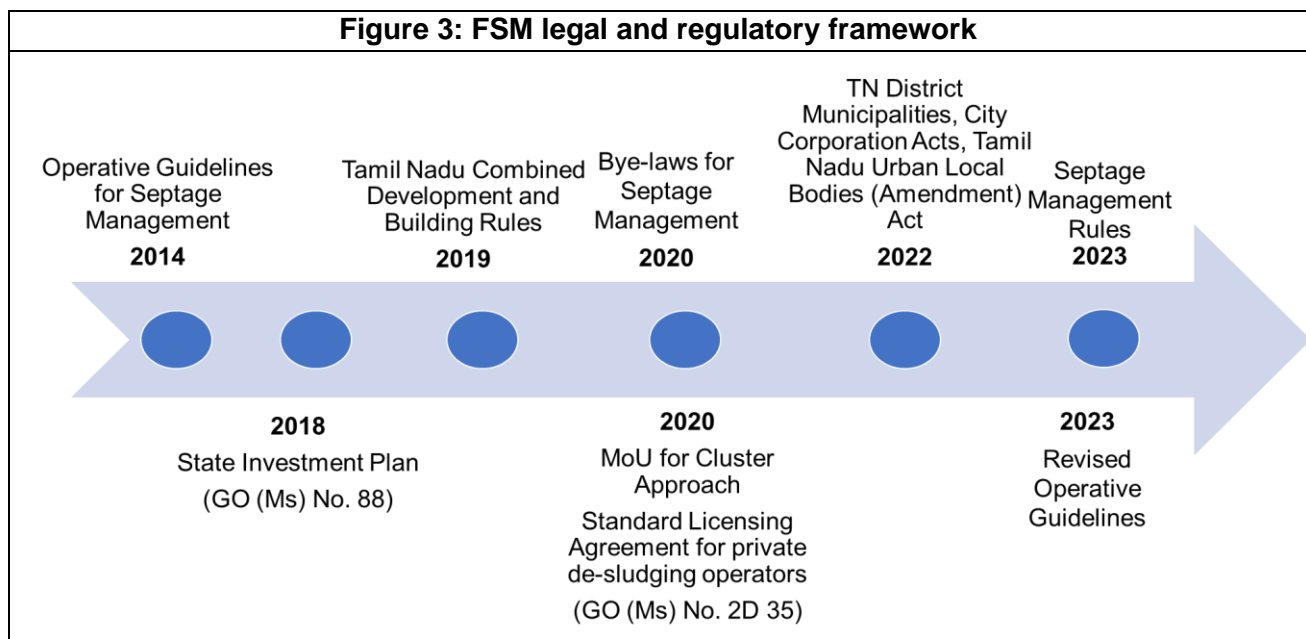
Apart from the financial support initiatives to the households, dedicated Information, education and communication (IEC) programmes were also conducted in different parts of the state to educate the households on taking the service connections to avoid direct disposal of wastewater to the stormwater drains or the neighbouring lands.



Accounting all these initiatives in stage 3, currently about 33 projects were completed, 8 under implementation and 14 are proposal stage.

FSM initiatives

For the ULBs which are not covered under the UGSS implementation scheme, a separate plan had been prepared on FSM for safely manage sanitation in the state. The timeline of legal and regulatory framework associated with FSM initiatives are given below in figure 5.



State Investment Plan (SIP): A SIP was approved by GoTN with a budgetary sanction of ~USD 0.3 million for areas not covered under UGSS in 2018 focussing to

- a) Improve existing treatment facilities infrastructure through co-treatment.
- b) Create new treatment facilities across the state using the cluster approach.

The plan was formulated to estimate the investment required to ensure full coverage of treatment facilities across all ULBs through a phased approach.

1. Co-treatment of fecal sludge in STPs- Practicing in 44 STPs covering 8.04 million population
2. Fecal sludge treatment plants (FSTP)
 - 31 FSTPs are operational – Capacity of 888 Kilo Litres per day, 2.01 million population
 - 25 FSTPs are under various stages of construction

Urban- Rural clustering: A cluster approach has been adopted to ensure optimum utilisation of resources. The ULBs have been clustered around existing treatment facilities or proposed facilities within a radius of 10 km initially. Also adopted the clustering exercise including the rural areas and was completed for 12,525 Village Panchayats (VPs)- 9,344 VPs clustered to 649 ULBs.

Urban poor- Containment improvement and scheduled desludging: Considering the initiatives for the urban poor, improvement of containments of households and community toilets using different technologies were implemented. An affordable de-sludging pilot was also launched in 5 urban poor communities in Tiruchirappalli, Tamil Nadu. About 156 CT/PTs onsite systems were studied to understand the footfall and load generation. Based on that, an application was developed with a compliance and monitoring system and has been successfully piloted in 54 high-footfall CT/PTs in Tiruchirappalli.

Coverage of sewerage scheme

Among the 159 ULBs of TN, 58 have received underground sewer connections covering a population of 4.53 million so far. The implementation of UGSS is in progress in 22 ULBs, and in DPR stage in 17 ULBs. In the first two stages of UGSS implementation, approximately 20% and 66.6% of the targeted households took the HSC voluntarily. The instalment scheme for deposit and connection charges encouraged more households to take HSCs. With the available loan scheme, more than 0.27 million HSCs were implemented resulting 65% of the total proposed HSCs in stage 3. Also, around 0.06 million HSCs got the benefit from the incentive fund by AMRUT 2.0, to ensure the utilisation of the assets created. However, the overall reach of UGSS to urban poor settlements across the UGSS-covered ULBs is unclear.

Wider Implications and discussions

The use of water supply and sewerage connection deposits, interest-free loans, and taxes in TN suggests that long-term sustainability of sewerage systems can be achieved with policy commitment, effective project appraisals and citizen involvement. The efforts by GoTN on UGSS last-mile connectivity can be taken as a reference by other states to improve the last mile with inclusive sanitation. The major lesson learned from the UGSS implementation is that the selection of towns for the implementation has to be based more on public demand, their capacity to pay back the loan amount, and the financial capability of the ULB than on the readiness of the DPR for the project.

References

1. Census India, 2011.
2. Directorate of Municipal Administration: GoTN, UGSS analysis.
3. GoTN 2018, G.O (Ms.) No. 126 Municipal Administration and Water Supply Department dated 28.11.2018.
4. Loan Sanction Letter, TUFIDCO, 2018.